

REMARKS**I. STATUS OF THE CLAIMS:**

Claims 1-22 and 28-30 are pending in the instant application. All claims have been rejected. No new matter is introduced.

II. CLAIM REJECTIONS – 35 USC § 103(a)

Claims 1, 2, 14-18, and 28-30 are rejected under 35 USC 103 over Miao USP 7,046,716 in view of Grube USP 5,239,678.

Claims 3-13 and 19-22 are rejected under 35 USC 103 over Miao USP 7,046,716 in view of Krantz US Publication 2004/0153676.

Claim 5 is rejected under 35 USC 103 over Miao USP 7,046,716 in view of Krantz US Publication 2004/0153676 and further in view of Grube USP 5,239,678.

III. APPLICANT'S RESPONSE TO CLAIM REJECTIONS – 35 USC § 103(a)

Miao fails to disclose or suggest the Applicant's claimed invention where the lower data rate channel provides the control channel for the higher data rate channel, as claimed by the Applicant.

Miao discloses a dual-mode transmitter of a UWB and WLAN 802.11a communication transceiver. The transmitter system of the dual-mode UWB and WLAN 802.11a is able to transmit either in a UWB mode for indoor or outdoor signals with a very-high data rate in the range of 3-10 meters or a WLAN 802.11a mode with signals at lower data rate in a longer range up to 100 meters.

During the UWB mode, the UWB transmitter receives user data bits. The bit data is then interleaved by using a block interleaver. A switch under a software control unit forms output bits into 11 multichannels. Then chip data of each channel is sequentially passed through an outdoor digital low pass shaping finite impulse response (FIR) filter system to limit the frequency bandwidth. The output chip data of each channel from a D/A converter is then modulated with a multi-carrier by using a multichannel-based multi-carrier with controlling from

the software control unit. The output analog signals of the multichannel-based multi-carrier are passed via a power amplifier (PA) 226 and an antenna into air.

During the WLAN 802.11a mode, the WLAN 802.11a transmitter 200 receives user data bits 210 and interleaved using an interleaver unit. The output bits of the interleaver unit are formed in parallel to be used for a 64-point inverse fast Fourier transform (IFFT). The output of the 64-point IFFT is performed for an image/quadrature (I/Q) modulation. Then output data of the I/Q modulation is passed through a digital low pass shaping FIR filter system to limit the frequency bandwidth with 20 MHz for the channel signal. The channel signal is passed through a D/A converter. The output from the D/A converter is modulated with a multi-carrier by using a multichannel-based multi-carrier controlled by a software control unit. The output analog signals of the multichannel-based multi-carrier are passed via the power amplifier through an antenna into air.

Maio fails to disclose the claimed subject matter, as follows:

(i) A communication channel for transmitting and receiving data and providing link manager protocol controlling a second higher data rate communication channel transmitting and receiving data only, as described in applicants' specification at page 8, lines 15-21.

(ii) a UWB channel free of link manager protocol for establishing a connection, as described in applicants' specification at page 16, lines 12-16.

(iii) a removable memory module attached to a terminal, the memory including a UWB transmitter/receiver and integrated memories, as described in applicants' specification at page 16, lines 11-16.

(iv) a UWB transceiver for capturing data at high data rate and transferring the captured data to a utilization device at a lower data rate, as described in applicants' specification at page 16 lines 7-10

The Examiner admits on page 2 of the Office action that Miao fails to disclose controlling the second wireless link via the first wireless communication, wherein the first wireless link frees the second wireless link from link control overhead. The Examiner combines Miao with the Grube reference, alleging that Grube discloses controlling the second wireless link

via the first wireless communication, wherein the first wireless link frees the second wireless link from link control overhead, citing Grube at Fig. 1, abstract, column 3, lines 7-30, column 4, lines 7-10, and column 4, lines 60-67.

Grube's abstract reads in part as follows:

... a central controller (101) to allocate a limited number of communication channels among a plurality of subscriber units (108-112). ... the controller (101) determines (205) whether all of the communication channels are busy. The controller then temporarily converts (215) the current control channel to a communication channel.

Grube at column 3, lines 7-30, reads in part as follows:

... In such a small system, e.g., only two voice channels to allocate amongst less than 200 users, the control channel 102 is likely to be idle most of the time. The present invention seeks to take advantage of control channel idle time to provide additional voice communication capacity. This is accomplished by allowing the control channel to temporarily operate as a voice channel during periods of heavy voice traffic and minimal control traffic. ...

Grube at column 4, lines 7-10, reads as follows:

FIG. 2B shows a detailed flow diagram 230 of the VOC determination routine 209. This routine is used to determine whether the current state of the system warrants the removal of the control channel.

Grube at column 4, lines 60-67 reads in part as follows:.

After the appropriate delay has transpired, the decision is then reached (242) which determines whether or not there is a voice channel available (i.e. freed up during the previously discussed delay period) to accept the voice call without having to take away the control channel. If a voice channel is available, the controller assigns (246) the voice channel request to the newly freed voice channel.

Grube discloses a cellular telephone system where a base station has a control channel and several voice channels. When the regular voice channels are busy and the control channel is idle, the control channel is temporarily converted into a voice channel. However, the voice channels and control channel belong to the same communication system, not to two different wireless links operating at two different data rates, where the lower data rate channel provides the control channel for the higher data rate channel, as claimed by the Applicant.

Moreover, Grube teaches away from the Applicant's claimed invention, in that Grube discloses that the control channel and the voice channels must operate at the same data rate, since

the control channel can be converted into a voice channel. Contrary to Grube, the Applicant is claiming two different wireless links operating at two different data rates.

The combination of Miao with Grube fails to disclose or suggest the Applicant's claimed invention where the lower data rate channel provides the control channel for the higher data rate channel, as claimed by the Applicant.

The Examiner admits on page 4 of the Office action that Miao fails to disclose removeable memory modules. The Examiner combines Miao with the Krantz reference, alleging that Krantz discloses removeable memory modules. However, Krantz fails to disclose or suggest the Applicant's claimed invention where the lower data rate channel provides the control channel for the higher data rate channel, as claimed by the Applicant. The combination of Miao with the Krantz fails to disclose or suggest the Applicant's claimed invention.

The combination of Miao, Krantz and Grube fails to disclose or suggest the Applicant's claimed invention where the lower data rate channel provides the control channel for the higher data rate channel, as claimed by the Applicant. The Applicant's claimed invention is patentable over any of these references and their combination.

CONCLUSION

Applicants have amended the claims to overcome the objections and rejections. Entry of the amendment, allowance of the claims and passage to issue of the application are requested.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. 50-4827, Order No. 1004289-136US (4208-4146).

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 50-4827, Order No. 1004289-136US (4208-4146).

Respectfully submitted,

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Dated: September 16, 2009

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